



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/466,180	12/17/1999	DONALD F. CAMERON	219.373373X0	9860

25693 7590 04/20/2007
KENYON & KENYON LLP
RIVERPARK TOWERS, SUITE 600
333 W. SAN CARLOS ST.
SAN JOSE, CA 95110

EXAMINER

TRAN, DENISE

ART UNIT	PAPER NUMBER
----------	--------------

2185

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

(5)

Office Action Summary	Application No. 09/466,180	Applicant(s) CAMERON ET AL.	
	Examiner Denise Tran	Art Unit 2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/20/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-12 and 14-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,6-12,14-15, 21-23,25-28,30 is/are allowed.
- 6) ☒ Claim(s) 16-19 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The applicant's amendment filed 12/20/06 has been considered. Claims 1, 3-4, 6-12, and 14-23, 25-29, 30 are presented for examination. Claims 2, 5, 13, 24, and 29 have been canceled.

2. The abstract of the disclosure is objected to because page 1, line 6 "120" should be -119(e)--. Correction is required. See MPEP § 608.01(b).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshioka et al., U.S. patent No. 5,835,963 (hereinafter Yoshioka), in view of Watkins, US. Patent No. 5,937,436.

As per claim 16, Yoshioka shows an apparatus, comprising:

a storage device to store translation table and protection table (TPT) entries for virtual to physical address translations (e.g., fig. 4, TLB entry, col. 10, line 35 to col. 11, line 3), wherein each of said TPT include protection attributes to control read and write access to a given memory region of a host memory (i.e., fig. 13, MPU or CPU is a host because it control the attached peripheral devices and MMRY is a main memory of the

Art Unit: 2185

host or a cache memory is the memory of the host; e.g., fig. 30, TLB protection exception, col. 31, line 35 to col. 32, lines 5; col. 10, line 35 to col. 11, line 3), and a memory protection tag to specify whether said apparatus has permission to access said host memory (e.g., col. 21, line 45 to 6; col. 23, lines 10-30, col. 27, lines 20-55; col. 31, line 35 to col. 32, line 6); and a mechanism to flush individual TPT entries stored in the storage device in accordance with a corresponding translation cacheable flag included in the individual TPT (e.g., fig. 4, V, fig. 8, col.28, lines 10-18; col. 24, lines 40-45). Yoshioka does not explicitly show a host-fabric adapter provided to interface with a switched fabric. Watkins shows a host-fabric adapter provided to interface with a switched fabric (e.g., fig. 3, el. 260k is an adapter which joins an ATM switch to bus 270, fig.2A, a workstation 200 is a host system because it is a computer connected to a network or work station 200,CPU 210 controls the attached peripheral devices 260, col. 3, lines 34-38 and col. 4, lines 50-60; col. 3, lines 14-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Watkins into the system of Yoshioka because it would allow a large number of data communications can be in operation simultaneously.

As per claims 17-19, Yoshioka shows the storage device corresponds to an internal cache for storing said TPT entries (e.g., fig. 13, TLB, cache; col. 10, lines 40-45); each of the selected translation and protection table entries represents translation of a single page of the host memory (e.g. col. 10, lines 50-55); and each TPT entry comprising a physical page address field to address a physical page frame of data entry (e.g. col. 10, lines 50-55) and said translation cacheable flag to specify whether said

Art Unit: 2185

apparatus may flush a corresponding translation and protection table (TPT) entry stored in said internal cache (e.g. col. 10, lines 35-55).

5. Claims 1, 3-4, 6-12, 14-15, 21-23, 25-28, and 30 are allowable over the prior art of record.

10. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Applicant's arguments filed 12/20/06 have been fully considered but they are not persuasive.

12. In the remarks, the applicant argued claim 16 is amended to incorporate the allowable subject matter of claims 21 and 26; therefore, claim 16 is allowable in its present form.

The examiner disagreed with the applicant's argument because claim 16 did not incorporate all the allowable subject matter of claims 21 and 26, such as an adapter in a host system provided to interface a switched fabric, comprising: a cache to store translation and access validation . . . a physical page address field which address a physical page frame of data entry," Claim 26; therefore, claim 16 is not allowable in its present form.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Tran whose telephone number is (571) 272-4189. The examiner can normally be reached on Monday, Thursday, and Friday from 8:45 a.m. to 5:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah, can be reached on (571) 272-4098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Deusepan

D.T.
4/1/07